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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/552,411

10/06/2005

Martin J. Edwards

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EXAMINER

TRAN, MY CHAU T

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/552,411	<b>Applicant(s)</b> EDWARDS ET AL.	
	<b>Examiner</b> MY-CHAU T. TRAN	<b>Art Unit</b> 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 26 June 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10 is/are allowed.
- 6) ☒ Claim(s) 1-3, 6 and 9 is/are rejected.
- 7) ☒ Claim(s) 4, 5, 7 and 8 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10/06/2005</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Application and Claims Status***

1. Applicant's preliminary amendment filed 10/06/2005 are acknowledged and entered.
2. Claims 1-10 were pending. Applicants have amended claims 1-10. No claims were added and/or cancelled. Therefore, claims 1-10 are currently pending and are under consideration in this Office Action.

### ***Priority***

3. Receipt is acknowledged of papers, i.e. United Kingdom Application No. 0308167.6 filed 04/09/2003, submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Information Disclosure Statement***

4. The information disclosure statement (IDS) filed on 10/06/2005 has been reviewed, and the references that have been considered are initialed as recorded in PTO-1449 form.

### ***Claim Objections***

5. Claim 5 is objected to because of the following informalities: It is noted that the recitation of '(132)' in regard to the instant claimed first sub-device in line 3 has been deleted; however, the recitation of '(132)' in regard to the instant claimed first sub-device in lines 2-3 has not been deleted. And as a result, it is unclear if this is a typographical error or that the recitation

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is a structural distinction with regard to the instant claimed first sub-device in line 3 and that of the instant claimed first sub-device in lines 2-3. Moreover, it is unclear as to the structural distinction between the instant claimed first sub-device in line 3 and that of the instant claimed first sub-device in lines 2-3 based on the recitation of '(132)'. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. The term "*further drive circuitry*" of claim 9 is vague and indefinite because it is unclear as to the type of drive circuitry was intended to convey with regard to the first recited instant claimed drive circuitry. That is the addition of the word "further" to an otherwise definite expression (i.e. drive circuitry) extends the scope of the expression so as to render it indefinite. Moreover neither the instant specification nor the instant claims define the term '*further drive circuitry*' of claim 9, i.e. what is the distinction between the first recited instant claimed drive circuitry and that of the instant claimed '*further drive circuitry*' since both has the function of driving a plurality of signals onto the plurality of addressing conductors. As a result, claim 9 is rejected under 35 U.S.C. 112, second paragraph.

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b. The term “*further signals*” of claim 9 is vague and indefinite because it is unclear as to the type of signal was intended to convey with regard to the first recited instant claimed plurality of signals. That is the addition of the word “further” to an otherwise definite expression (i.e. signal) extends the scope of the expression so as to render it indefinite. Moreover neither the instant specification nor the instant claims define the term ‘*further signals*’ of claim 9, i.e. what is the distinction between the first recited instant claimed plurality of signals and that of the instant claimed ‘*plurality of further signals*’. As a result, claim 9 is rejected under 35 U.S.C. 112, second paragraph.

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 1, 6, and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Akiyama (US Patent 6,278,426 B2).

For ***claims 1, 6, and 9***, Akiyama discloses a liquid crystal display device with a switching circuit (see e.g. Abstract; col. 1, lines 5-8; col. 2, lines 10-34; figs. 2, 6, and 20). The liquid crystal display device as illustrated by figure 6 comprises a signal line drive circuit (ref. #17) that

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is connected to a plurality of signal lines (ref. #14) (refers to instant claimed plurality of charging conductors), a scanning line driver circuit (ref. #16) (refers to instant claimed drive circuitry) that is connected to a plurality of scan lines (ref. #13) (refers to instant claimed plurality of addressing conductors), a control line driver circuit (ref. #18) (refers to instant claimed further drive circuitry) that is connected to a plurality of control lines (ref. #15), and pixel portion (ref. #12) that are formed at the intersection of the signal line and scan line (refers to instant claimed plurality of matrix array elements) (see e.g. col. 9, lines 15-25; col. 14, lines 14-24; fig. 20).

Akiyama also disclose that a power source line are also formed, which imply that the crystal display device also comprise a power supply as claimed in claim 9 (see e.g. col. 9, lines 15-25).

As depicted by figure 2, in one embodiment each pixel portion comprises a transistor (ref. #203) (refers to instant claimed first switch) is connected to the scanning line (ref. #201) (refers to instant claimed plurality of addressing conductors), the signal line (ref. #202) (refers to instant claimed plurality of charging conductors), and to a capacitor (ref. #204) (refers to instant claimed first capacitive device); the capacitor (ref. #210) (refers to instant claimed second capacitive device) is connected to the capacitor (ref. #204) (refers to instant claimed first capacitive device) by the transistor (ref. #206) (refers to instant claimed second switch); and the transistor (ref. #205) is connected to the capacitor (ref. #204) (refers to instant claimed first capacitive device), the capacitor (ref. #210) (refers to instant claimed second capacitive device), and a power source (ref. #208) (see e.g. col. 5, line 47 thru col. 6, line 8). As shown in figure 2, the reference #Vsig of the signal line (ref. #202) (refers to instant claimed plurality of charging conductors) imply that a potential source is provided via the associated charging conductor as claimed in claim 6.

Therefore, the device of Akiyama does anticipate the instant claimed invention.

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10. Claims 1-3, 6, and 9 are rejected under 35 U.S.C. 102(e) as being anticipated by Kageyama et al. (US Patent 7,221,343 B2; *filing date of 5/16/2003*).

For **claims 1-3, 6, and 9**, Kageyama et al. disclose an image display apparatus (see e.g. Abstract; col. 6-8; col. 2, lines 46-53; figs. 2, 10, and 13). As illustrated by figure 2, the apparatus comprises a plurality of pixels (ref. #12) (refers to instant claimed plurality of matrix array elements), a signal circuit (ref. #3) for generating signals for signal lines of reference #D1-Dm (refers to instant claimed plurality of charging conductors), a scanning circuit (ref. #2) (refers to instant claimed drive circuitry/further drive circuit) for generating signals for signals lines of reference #W1-Wn and #P1-Pn (refers to instant claimed plurality of addressing conductors), and a power supply (ref. #26) that is connected to lines E1-Em (see e.g. col. 4, lines 4-37). Moreover, the different signal lines of reference #W1-Wn and #P1-Pn connected to the scanning circuit (ref. #2) imply that two different signals are applied as claimed in claim 9, i.e. a plurality of signals and a plurality of further signals. As depicted by figure 4, in one embodiment each pixel comprises a transistor (ref. #13) (refers to instant claimed first switch) that is connected to the signal lines D1 (refers to instant claimed plurality of charging conductors), W1 (refers to instant claimed plurality of addressing conductors), and a capacitor (ref. #17) (refers to instant claimed first capacitive device); the capacitor (ref. #18) (refers to instant claimed second capacitive device) is connected to the capacitor (ref. #17) (refers to instant claimed first capacitive device) by way of the transistor (ref. #14) (refers to instant claimed second switch); the transistor (ref. #15) (refers to instant claimed third switch) is connected to the capacitor (ref. #17) (refers to instant claimed first capacitive device), a potential source via the signal line E1, and the transistor (ref. #16) (refers to instant claimed fourth switch and instant claim 3); the

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transistor (ref. #16) (refers to instant claimed fourth switch) is coupled between the capacitor (ref. #17) (refers to instant claimed first capacitive device) and a potential source via the signal line E1 (refers to instant claim 2) (see e.g. col. 3, line 39 thru col. 4, line 3; col. 7, line 30-47).

Therefore, the device of Kageyama et al. does anticipate the instant claimed invention.

### ***Allowable Subject Matter***

11. Claims 4, 5, 7, and 8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

12. The following is a statement of reasons for the indication of allowable subject matter of claim 10: The instant claim 10 is allowable for the reason that the cited prior arts do not teach or fairly suggest the presently claimed method with the method steps combination of storing a first voltage across the first capacitive device of a matrix array element; storing the first voltage across the second capacitive device of the matrix element; and replacing the first voltage across the first capacitive device of the matrix array element with a second voltage.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MY-CHAU T. TRAN whose telephone number is (571)272-0810. The examiner can normally be reached on Monday: 8:00-2:30; Tuesday-Thursday: 7:30-5:00; Friday: 8:00-3:30.



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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard A. Hjerpe can be reached on 571-272-7691. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/MY-CHAU T. TRAN/  
Primary Examiner, Art Unit 2629

September 6, 2008